

# SERVICE MANUAL

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POWERD SUBWOOFER

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## SPECIFICATIONS

<b>Input terminals</b>	INPUT 1 jack INPUT 2 terminals
<b>Input sensitivity/Impedance</b>	INPUT 1: 0.2 V/50 k $\Omega$ (at 60 Hz) INPUT 2: 2 V/4.4 k $\Omega$ (L and R) (at 60 Hz)
<b>Output terminals</b>	SPEAKERS OUT terminals
<b>Power output</b>	<U Model> 32 W (50 Hz to 120 Hz, T.H.D. less than 1%, 8 $\Omega$ ) 40 W (8 $\Omega$ , T.H.D. 10% at 60 Hz) <EZ, HR Models> 32 W (8 $\Omega$ , T.H.D. 1% at 60 Hz) 40 W (8 $\Omega$ , T.H.D. 10% at 60 Hz)
<b>Frequency response</b>	45 Hz - 200 Hz
<b>Speaker type</b>	Bass reflex type
<b>Speaker unit</b>	13 cm (5 $\frac{1}{8}$ in.) (Magnetically shielded type)
<b>Power requirement</b>	<U model> AC 120 V, 60 Hz <EZ Model> AC 230 V, 50 Hz <HR Model> AC 120 V/220 V - 240 V switchable, 50/60 Hz
<b>Power consumption</b>	30 W <U model> 48 W <EZ, HR Models>
<b>Dimensions</b>	160 x 233 x 376 mm (W x H x D) (6 $\frac{3}{8}$ x 9 $\frac{1}{8}$ x 14 $\frac{7}{8}$ in.)
<b>Weight</b>	5.8 kg (12 lbs 13 oz.)

- Design and specifications are subject to change without notice.

## ACCESSORIES LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-YP5-901-010	IB, H (ECA) D<HR>	
1	8A-YP5-903-010	IB, U (ESF) D<U>	
1	8A-YP5-906-010	IB, EZ (9L) D<EZ>	
2	87-YP3-632-010	186-C13000, CORD ASSY	
3	87-099-789-010	PLUG, ADPTR IR44<HR>	



ELECTRICAL MAIN PARTS LIST

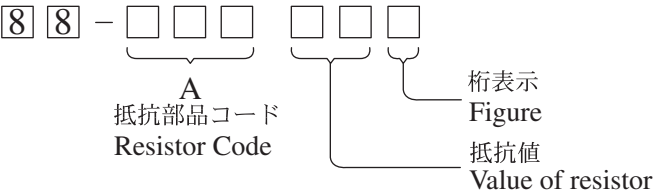
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REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
TRANSISTOR				S401	86-SP2-633-010		SW,SL 1-1-2
	87-A30-127-010		TR,2SD2478	FRONT C.B			
	87-A30-126-010		TR,2SB1616				
	87-A30-091-080		FET,2SJ460	CN105	87-009-033-010		CONN.5P V WHT PH
	87-026-609-080		TR,KTA1266GR	D301	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
	87-026-610-080		TR,KTC3198GR	VR401	8A-YP3-617-010		VR,RTRY 20KX1 1
	87-A30-087-080		C-FET,2SK2158	TRANS C.B			
	87-026-269-080		TR,DTA114ES				
	89-322-405-080		TR,2SC2240GR				
DIODE				C101	87-A10-479-090		CAP,CER 2200P-250 MEH
	8Z-YP2-618-010		151-540235,DIODE 1N5402 LT	C102	87-018-209-080		CAP, CER 0.1-50V
	87-020-465-080		DIODE,1SS133 (110MA)	C103	87-018-209-080		CAP, CER 0.1-50V
	87-A40-349-080		ZENER,HTZJ7.5C	CN101	87-049-469-010		CONN,4P V
				CN102	87-099-674-010		CONN,2P VA V
MAIN C.B				⚠CN106	87-A60-959-010		CONN.5P VHB5P9<HR>
				⚠F101	87-035-483-010		FUSE,1.25A 125V T237<U>
				⚠F101	87-035-453-010		FUSE,1.25A 250V T218<EZ,HR>
				⚠FC101	87-033-213-080		CLAMP, FUSE
				⚠FC102	87-033-213-080		CLAMP, FUSE
				⚠PR101	87-026-681-080		PROTECTOR,5A60V 491<EZ,HR>
				⚠PR102	87-026-681-080		PROTECTOR,5A60V 491<EZ,HR>
				⚠PT101	8A-YP5-618-010		PT,EZ<EZ>
				⚠PT101	8A-YP5-617-010		PT,HR<HR>
				⚠PT101	8A-YP5-606-010		PT,U<U>
				⚠T101	82-304-743-010		TERMINAL, 1P
				⚠T102	82-304-743-010		TERMINAL, 1P
				AC SW C.B<HR>			
				⚠CON106	8A-YP5-622-010		CONN ASSY,5P VH<HR>
				⚠S501	87-036-211-010		SW,SL 2-2-3 DPDT R<HR>
				POWER SW C.B			
				CN103	87-A61-327-010		CONN.2P H WHT VA
				⚠S101	87-YP5-626-010		SW,PUSH 1-1-1 SY16-52-3
C1	87-010-178-080		C-CAP,S 1000P				
C2	87-010-178-080		C-CAP,S 1000P				
C3	87-010-805-080		C-CAP,1-16				
C104	87-016-539-090		CAP,E 3300-35 SMG				
C105	87-016-539-090		CAP,E 3300-35 SMG				
C201	87-010-246-080		CAP, ELECT 47-35V				
C202	87-010-246-080		CAP, ELECT 47-35V				
C203	87-010-384-080		CAP, ELECT 100-25V				
C204	87-010-384-080		CAP, ELECT 100-25V				
C205	87-010-384-080		CAP, ELECT 100-25V				
C206	87-010-384-080		CAP, ELECT 100-25V				
C207	87-012-156-080		C-CAP,S 220P-50 CH				
C208	87-012-156-080		C-CAP,S 220P-50 CH				
C209	87-010-196-080		CHIP CAPACITOR,0.1-25				
C210	87-010-196-080		CHIP CAPACITOR,0.1-25				
C211	87-010-196-080		CHIP CAPACITOR,0.1-25				
C212	87-010-196-080		CHIP CAPACITOR,0.1-25				
C213	87-010-197-080		CAP, CHIP 0.01 DM				
C214	87-010-406-080		CAP, ELECT 22-50				
C215	87-010-406-080		CAP, ELECT 22-50				
C301	87-010-401-080		CAP, ELECT 1-50V				
C304	87-010-544-080		CAP, ELECT 0.1-50V				
C305	87-010-383-080		CAP, ELECT 33-25V				
C306	87-010-405-080		CAP, ELECT 10-50V				
C307	87-010-544-080		CAP, ELECT 0.1-50V				
C308	87-010-404-080		CAP, ELECT 4.7-50V				
C309	87-010-405-080		CAP, ELECT 10-50V				
C401	87-010-401-080		CAP, ELECT 1-50V				
C402	87-010-385-080		CAP, ELECT 220-25V				
C405	87-010-401-080		CAP, ELECT 1-50V				
C406	87-010-385-080		CAP, ELECT 220-25V				
C407	87-010-385-080		CAP, ELECT 220-25V				
C408	87-010-405-080		CAP, ELECT 10-50V				
C409	87-010-405-080		CAP, ELECT 10-50V				
C410	87-010-404-080		CAP, ELECT 4.7-50V				
C411	87-010-405-080		CAP, ELECT 10-50V				
C412	87-010-405-080		CAP, ELECT 10-50V				
C413	87-010-402-010		CAP,E 2.2-50V				
C414	87-010-401-080		CAP, ELECT 1-50V				
C415	87-010-384-080		CAP, ELECT 100-25V				
C416	87-010-402-010		CAP,E 2.2-50V				
CN104	87-009-033-010		CONN.5P V WHT PT				
CN301	87-099-043-010		CONN 2P EH				
CNA101	8A-YP5-610-010		CONN ASSY,4P SCNEHR				
J401	87-099-801-010		JACK,PIN 1P BLK				
J402	87-A60-356-010		TERMINAL,SP 4P				
J403	87-A60-356-010		TERMINAL,SP 4P				
R223	8Z-YP2-613-080		116-R1WR22JT,RES M/F 0.22-				
R224	8Z-YP2-613-080		116-R1WR22JT,RES M/F 0.22-				
S201	8A-YP5-616-010		SW,SL 2-2-2 SSSF125800				
S301	86-SP2-633-010		SW,SL 1-1-2				


○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

Chip Resistor Part Coding



チップ抵抗  
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A
				外形／Form	L	W	t	Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



E C B

2SC2240  
KTA1266  
KTC3198



E C B

DTA114ES



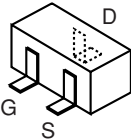
B C E

2SB1616  
2SD2478



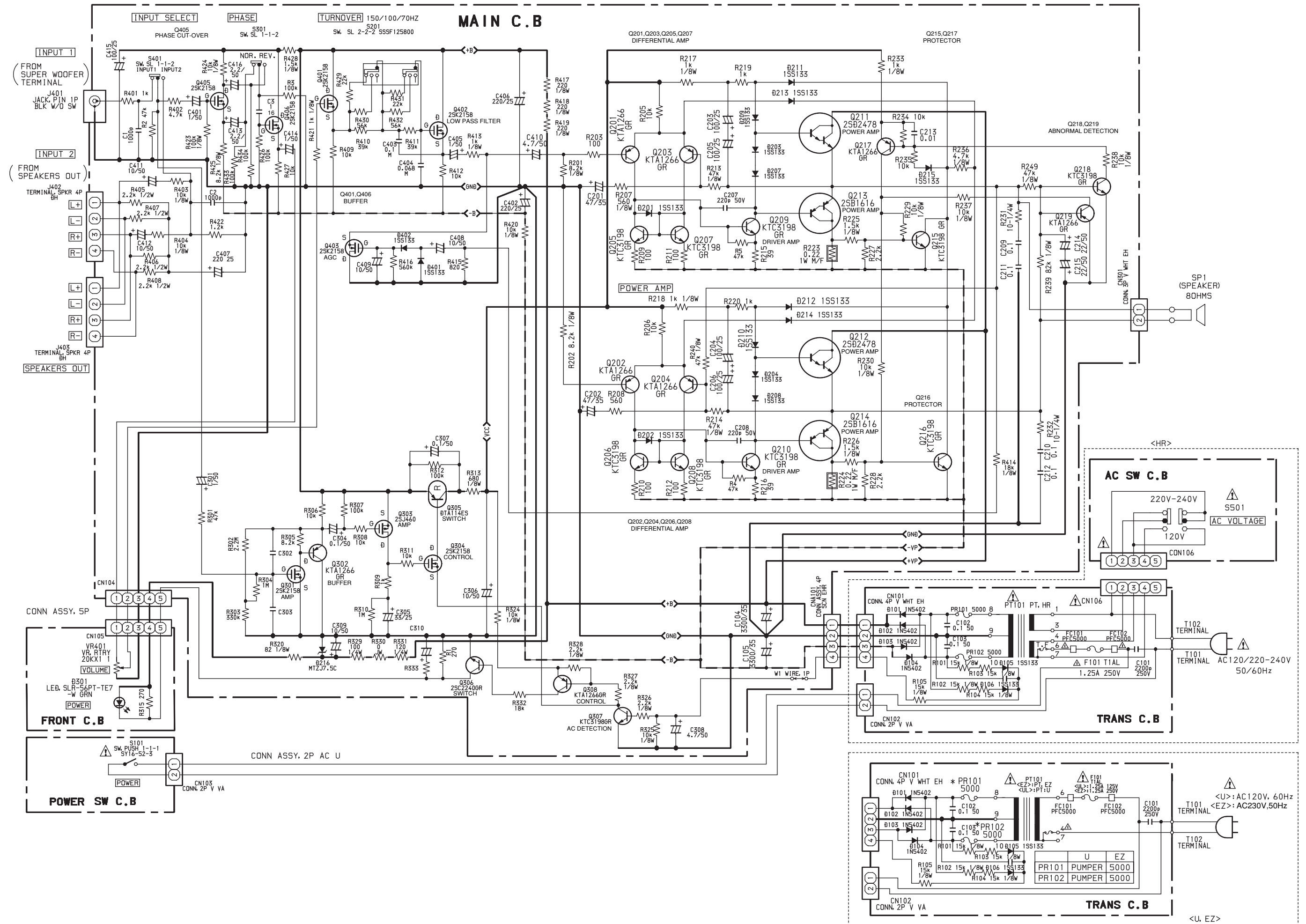
S D G

2SJ460



2SK2158

### SCHEMATIC DIAGRAM



The diagram illustrates the layout of a stereo amplifier system, organized into four main circuit boards and a speaker, with a coordinate grid (1-14, A-J) for reference.

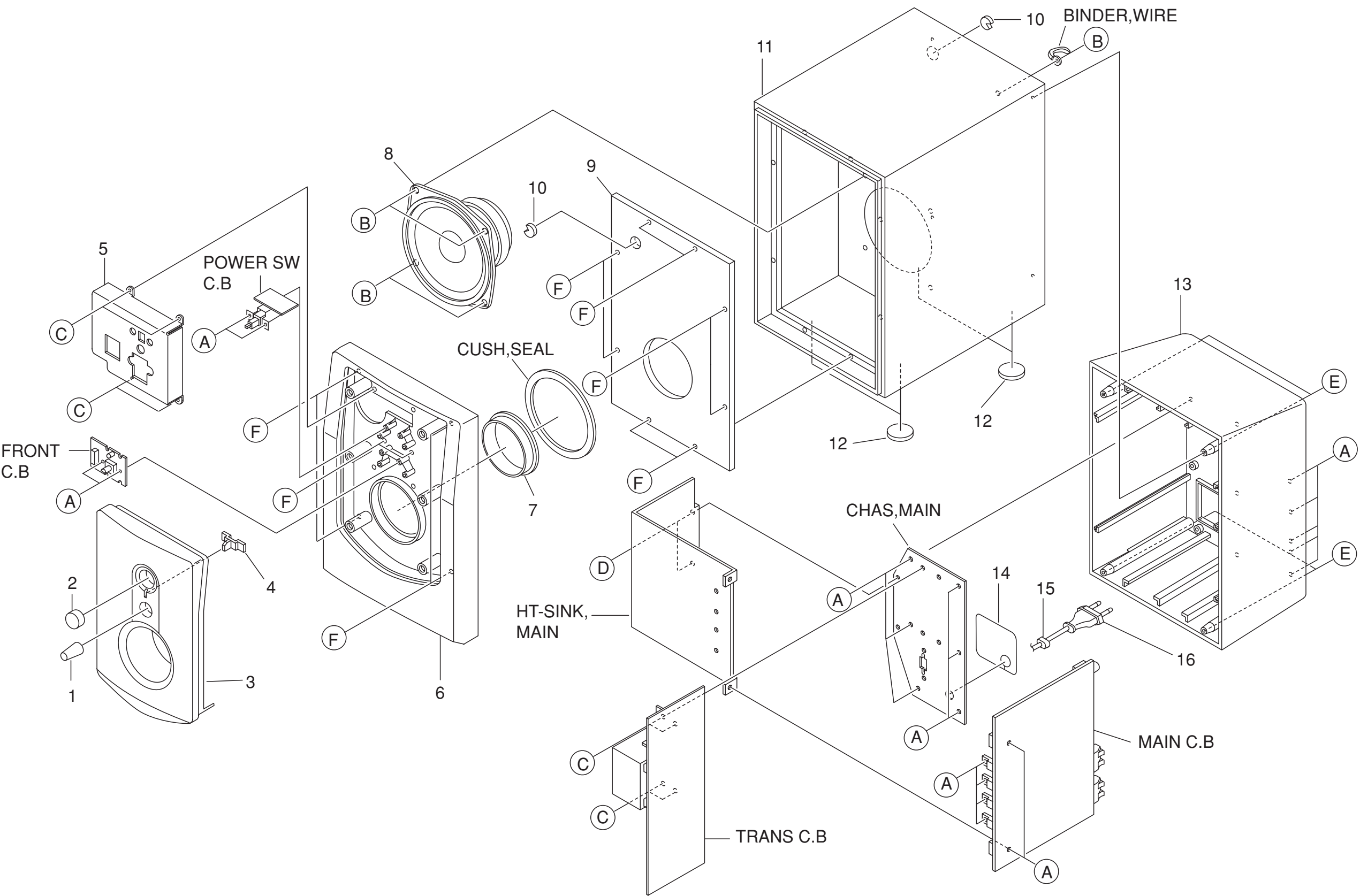
- TRANS C.B. (Transformer Circuit Board):** Located in the top left, it features a transformer (T101, T102) and various electronic components including diodes (D101-D106), resistors (R101-R106), capacitors (C101-C106), and a fuse (F101). It is connected to a power source via a connector (CN101).
- POWER SW C.B. (Power Switch Circuit Board):** Located in the top center, it contains a power switch (S101) and a fuse (F101). It is connected to the TRANS C.B. via a connector (CN101).
- AC SW C.B.(HR) (AC Switch Circuit Board):** Located in the middle left, it features a switch (S501) and a fuse (F101). It is connected to the TRANS C.B. via a connector (CN101).
- MAIN C.B. (Main Circuit Board):** The largest board, located in the bottom right, it contains the main amplifier circuitry, including multiple transistors (Q201-Q208), resistors (R201-R208), capacitors (C201-C208), and a speaker (SP1). It is connected to the TRANS C.B. via a connector (CN101).
- FRONT C.B. (Front Panel Circuit Board):** Located in the top right, it features a volume control potentiometer (VR401) and a power switch (D301). It is connected to the MAIN C.B. via a connector (CN101).
- SP1 (SPEAKER):** A circular speaker located in the bottom center, connected to the MAIN C.B. via a connector (CN101).

The diagram includes a legend for color-coded wiring:

- <U>: AC120V, 60Hz
- <EZ>: AC230V, 50Hz
- <HR>: AC120V/220-240V, 50/60Hz

The diagram also includes a legend for component types:

- S501: AC VOLTAGE 120V 220-240V
- S401: INPUT SELECT INPUT1 INPUT2
- S301: PHASE NORMAL REVERSE
- S201: TURNOVER 150Hz 100Hz 70Hz
- J401: INPUT1 (FROM SUPER WOOFER TERMINAL)
- J402: INPUT2 (FROM SPEAKERS OUT)
- J403: SPEAKERS OUT



## MECHANICAL MAIN PARTS LIST 1/1

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-YP5-005-010		BTN, POWER<U, HR>
1	8A-YP5-013-010		BTN, POWER S<EZ>
2	8A-YP5-003-010		KNOB, RTRY VOL<U, HR>
2	8A-YP5-012-010		KNOB, RTRY VOL S<EZ>
3	8A-YP5-002-010		CABI, PANEL<U, HR>
3	8A-YP5-011-010		CABI, PANEL S<EZ>
4	8A-YP5-004-010		WINDOW, LED
5	8A-YP5-208-010		COVER, SW
6	8A-YP5-001-010		CABI, FRONT
7	8A-YP5-201-010		RING, DUCT
8	8A-YP5-607-010		SPKR, 130 8OHM
9	8A-YP5-207-010		BOARD, WOOD FRONT
10	8A-YP2-215-010		BUSHING, WIRE
11	8A-YP5-008-010		CABI, WOOD BOX
12	86-SP8-206-010		FOOT, BOT
13	8A-YP5-006-010		CABI, REAR
14	8A-YP5-014-010		PLATE, AC H<HR>
14	8A-YP5-009-010		PLATE, AC<U, EZ>
15	86-SP2-637-010		BUSHING, AC U
△	16	87-YP4-620-010	181-207002BC, AC CORD ASSY<U>
△	16	86-SP2-634-010	AC CORD, E<EZ, HR>
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	8Z-YP1-231-010		SW+3.5-12
C	87-067-566-010		TAPPING SCREW, VFTT+3-6
D	87-067-689-010		TAPPING SCREW, BVTT+3-8
E	8Z-YP1-233-010		SW+3.5-20
F	87-067-698-010		BVT2+3-18 (W/O, SLOT)

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

